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August 16, 2021

Via Overnight Mail, Electronic Mail and CDRS

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Re: *United States of America and Louisiana Department of Environmental Quality* v. *Cabot Corporation,* Case # 6:13-cv-03095 Consent Decree – Force Majeure

Dear Sir / Madam:

On behalf of Cabot Corporation, please accept this submission as notice of a Force Majeure event that may delay or prevent compliance with obligations arising under the above-

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referenced Consent Decree at Cabot's Canal facility located in Franklin, Louisiana. This notice is made in accordance with the requirements set forth in Paragraph 67 of the above-referenced Consent Decree.[1]

The events underlying this notice relate to Cabot's operation of the Wet Gas Scrubber "WGS" system pursuant to paragraph 17 of the Consent Decree. As required thereunder, Cabot installed and commenced operation of the WGS in advance of the April 1, 2021 compliance deadline and achieved compliance with the SO_2 7-day Rolling Average Emissions Limit. Since that time, Cabot has continued to work with its vendors to optimize WGS system operation, including continuing evaluation of performance of the continuous emission monitoring system ("CEMS") and continuing evaluations of the WGS relative to optimization of control of SO_2 and PM in advance of the PM Control Technology and Emission Limit compliance date set forth in paragraph 30 of the Consent Decree. As described herein, a failure of the WGS has occurred, which will require a replacement of the demister portion of the WGS and repairs to the absorber vessel where the demisters are installed and restart of the WGS system. These events are anticipated to delay or prevent compliance with Consent Decree requirements during the restart of the system and constitute a Force Majeure event under the Consent Decree. Process operations at the Canal facility are currently shut down and will remain shut down until the WGS is rebuilt and restarted.

The attachments to this letter contain Confidential Business Information subject to protection under 40 C.F.R. Part 2 and La R.S. 30:2030 and Title 33, Section 501 et. seq. of the Louisiana Code. Accordingly, the confidential portions of these documents are redacted from the electronic versions of this submittal, and the unredacted copies of this submittal are submitted in hard copy. We ask that the LDEQ and EPA maintain the confidentiality of these documents in accordance with applicable state and federal law.

WGS System Failure

Beginning on July 26, 2021, Cabot observed irregularities in WGS system operations following an incinerator protection shutdown, which affected the air pollution control system (inclusive of thermal oxidizer and Selective Catalytic Reduction system ("SCR"), which operate in series with and upstream of the WGS). As a result of the trip, process operations were taken off production, the control system was switched to emergency mode, and increased amounts of water and gypsum slurry were subsequently observed in the WGS. While these irregularities did not appear to affect the performance of the system from an emission standpoint, plant personnel monitored the system closely and undertook various control adjustments to address excess water and slurry levels. Plant operators observed flooding within the control system area at volumes significant enough to risk a breach of containment and uncontrolled discharge of slurry into adjacent surface waters. In response to these events, plant personnel immediately began to adjust

[1] This notice is also intended to satisfy the notice requirement set forth in paragraph 50 of the Consent Decree, to the extent applicable.

the water and slurry pumping systems in order to prevent an uncontrolled discharge from the plant into the adjacent bayou. The emergency quench system was shut down for discharge control while recirculating pumps were off, and recirculating pumps were restarted after a series of required system checkout procedures. Over the course of the next several days, plant personnel restarted the control system, and during these restarts and troubleshooting efforts, observed a gypsum fall-out within the plant property from the WGS system. At that time, plant personnel initiated a total shutdown and cooldown process in order to fully assess the air pollution control system, and specifically the WGS. After the system was cooled sufficiently to allow safe access for inspection on Friday July 30, plant personnel inspected the WGS with assistance from outside experts. At that time, it became evident that the demister portion of the WGS had been badly damaged and rendered inoperable. (Pictures of the WGS demister both before and after the failure are attached hereto as Attachment A.) Since July 30, Cabot has commenced and is continuing an intensive review of the failure and its causes, along with the anticipated needs for repair and rebuild of the demister.

In its review of operating and emissions data, Cabot determined that the WGS system failure did not cause any exceedance of an emission limit governed by the Consent Decree. CEMS data collected during all operational periods, including during the failure events, indicate that the SO_2 7-day Rolling Average Emission limit was met. In addition, the WGS failure did not adversely affect performance of the SCR system utilized for NOx control, and the NOx 7-day Rolling Average Emission Limit was likewise met at all relevant times. Cabot reported the release of gypsum to the Louisiana Department of Environmental Quality ("LDEQ") as a release of a "Material Not Listed" in accordance with LDEQ regulatory requirements.

Based upon its review of information available as of the date of this letter, Cabot believes that the failure of the WGS was caused by high temperatures inside the WGS absorber tower resulting from residual gases that traveled through the system during the shutdown and restart of the emergency quench and recirculation pump systems. These high temperatures caused damage to the integrity of the demister system. The demister system, which includes a fiber reinforced plastic ("FRP") coated steel support structure and 152 demisting modules sitting within the tower structure, was observed upon inspection to be significantly weakened and deformed. All demisting modules, which are composed of polysulfone plastic ("PSU"), were deformed or distorted and had been dislodged from the supporting structure of the demister. In addition, several of the FRP supporting members were discovered to have cracks or deformations as a result of the demister failure, and all 400 spray nozzles (also made from PSU) were damaged and in need of replacement. At this time, Cabot has not observed any significant damage to the absorber tower structure, which is also composed of FRP, but additional inspections will be undertaken with the assistance of FRP specialists. Cabot continues to investigate the root cause of the events leading to the WGS failure, including the water and slurry system operating conditions that led to system flooding, and will update this submittal as appropriate if additional information is learned.

WGS System Rebuild

As noted above, process operations at the Canal facility were shut down during the course of the WGS system failure event, and as of the date of this letter facility process operations have not been restarted. In conjunction with its root cause analysis of the WGS failure, and in order to facilitate a timely and efficient restart of operations, Cabot has commenced an evaluation of the necessary actions and timing for rebuild and restart of the WGS. Unfortunately, the extent of the damage requires a total replacement of the demister, which is a proprietary design only available from Cabot's supplier in Germany and is also a critical component of the particulate matter emissions control system. Cabot has evaluated several different sourcing options for the demister and has determined that these options are neither technically compatible with the design of the WGS nor likely to be readily available. In addition, Cabot has determined that replacement of the FRP-based demister system materials will require a five-month lead time because of the time-intensive process for making FRP. As an alternative, these FRP components can instead be fabricated with PSU on an expedited basis; however, the expected lifespan of the PSU components is three years as compared to the 20-year expected lifespan of FRP components and would therefore require additional process downtime when permanent components are installed. Other materials, such as duplex stainless steel and polypropylene, would not have adequate surface tension properties to prevent the buildup of particulate matter on the mist eliminator modules and are therefore not viable.

Based on extensive discussions with the demister vendor, Cabot has contracted for expedited fabrication of a replacement demister using PSU. Cabot has arranged for the vendor to work twenty-four hours per day and six days a week on this project, as allowed under German law. The vendor began fabrication on August 2 and expects to begin shipment of replacement parts on August 20. (Documentation from Cabot's vendor is attached hereto as Attachment B.) Based on careful planning by the vendor and Cabot's logistics specialists, expedited shipping is anticipated to require 3-4 days for arrival at the Canal facility, barring unforeseen shipping delays. On-site installation of the mist eliminator components will be undertaken by Cabot's construction management team with the assistance of a specialty contractor and is expected to require 1-2 days, barring any unforeseen weather delays. (Documentation from Cabot's specialty contractor is attached hereto as Attachment C.) On a parallel path with these activities, Cabot's on-site personnel will remove the damaged demister and all spray nozzles, inspect and repair the damaged FRP-lined demister supports, replace the spray nozzles, and install 112 new demister modules. (Documentation of Cabot's work schedule is attached hereto as Attachment D.) Based on these time estimates, Cabot anticipates that construction will be complete, and restart will begin on or after August 30 and will require 60 days to properly evaluate the performance of the absorber system for SO2 control and evaluate and optimize the particulate matter control performance.

Force Majeure Request

Cabot anticipates that startup and re-commissioning of the newly rebuilt WGS system will require 1-2 days of activities that will include heat up of the incinerator, slurry transfer system startup, absorber slurry recirculation system startup, and evaluation of the CEMS. Based on the dynamic and complex nature and sequencing of these activities, Cabot anticipates the potential that continuous compliance with the following requirements of the Consent Decree may not be possible during the 60-day period after restart of the WGS:

- Continuous Operation of the WGS and SO_2 7-day/365-day Rolling Average Emission Limits (paragraph 17): Cabot anticipates that process operations will restart at the Canal facility prior to initiation of WGS system operation, in order to sequentially troubleshoot process operations prior to start of the air pollution control system, inclusive of the SCR and WGS controls in sequence. In addition, when the WGS system is restarted, Cabot anticipates that up to 60 days of operation and shakedown will be required before the system is optimized to perform at the removal efficiency required to consistently meet the Consent Decree emission limitation for SO_2. During this time and until restart and shakedown procedures are complete, Cabot requests a suspension of the requirement to Continuously Operate, as defined in the Consent Decree, and that Cabot's calculation of 7-day and 365-day rolling averages would not include data collected during this restart and shakedown period. Cabot is developing a detailed schedule and operating procedure for these activities and will supplement this notice when these plans are complete.

- Continuous Operation of Selective Catalytic Reduction ("SCR") system and NOx 7-day/365-day Rolling Average Emission Limits (paragraph 26): Cabot anticipates that process operations will restart at the Canal facility prior to initiation of SCR system operation, in order to sequentially troubleshoot process operations prior to start of the air pollution control system, inclusive of the SCR and WGS controls in sequence. In addition, when the SCR system is restarted, Cabot anticipates that a limited period of operation and shakedown will be required before the system is optimized to perform at the removal efficiency required to consistently meet the Consent Decree emission limitation for NOx. During this time and until restart and shakedown procedures are complete, Cabot requests a suspension of the requirement to Continuously Operate, as defined in the Consent Decree, and that Cabot's calculation of 7-day and 365-day rolling averages would not include data collected during this restart and shakedown period. At this time, Cabot has no reason to believe that the WGS failure impacted the SCR unit, and therefore the restart activities are not expected to significantly impact or delay SCR performance. Cabot has nonetheless identified this as a potential item out of an abundance of caution. Cabot is developing a

detailed schedule and operating procedure for these activities and will supplement this notice when these plans are complete.

- CEMS Operation (paragraphs 20 and 29): When the process and control systems are restarted, Cabot believes that a period of operation and evaluation will be needed to ensure the accuracy of the CEMs and to ensure that no systems issues were caused by the higher gas temperatures and the excess gypsum released during the event. While we are working to resolve visible issues, the full evaluation cannot be completed until the process and control systems are operational. Furthermore, should any extensive system repairs be required, a 7-day calibration drift test and RATA may be required in accordance with our Quality Control and Quality Assurance plan. During this time, Cabot requests that the 7-day and 365-day rolling averages for compliance with paragraphs 17 and 26 would not be measured. Cabot is developing a detailed schedule and operating procedure for these activities and will supplement this notice when these plans are complete.

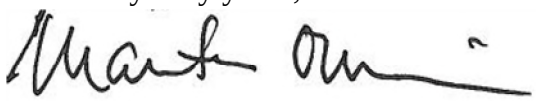
- PM 3-hour Average Emission Limit (paragraph 30, 30a – e, 31): The Consent Decree identifies October 1, 2021 as the date of Continuous Operation of the WGS in order to achieve compliance with the PM 3-hour Average Emission Limit. In addition, as required by the First Amendment to the Consent Decree (Paragraph 30 a – e), Cabot was preparing a written notification to propose an alternate PM limit. Finally, Cabot was developing the particulate matter protocol and performance test to occur in September as required by Paragraph 31. As a result of the WGS failure and required rebuild and restart, Cabot anticipates that demonstration of compliance with the PM limit may be delayed beyond the compliance date and may affect the level of the proposed alternate particulate matter limit since the demisters are a critical component of the absorber for PM control. Cabot therefore requests an extension of time to fulfill these requirements of the Consent Decree. Cabot is developing a detailed schedule and operating procedure for these activities and will supplement this notice when these plans are complete.

Cabot has exercised best efforts to fulfill the relevant obligations of the Consent Decree, including best efforts to anticipate and mitigate the Force Majeure events associated with the failure of the WGS system and the need to rebuild the demister portion of the system. However, both the failure of the WGS and the necessary rebuild and restart activities constitute circumstances beyond Cabot's control. At all times during the events surrounding the WGS failure, Cabot and its plant personnel took all appropriate measures to mitigate the effects of the failure, including the decision to shut down process operations in order to avoid any uncontrolled releases or emissions. Cabot has taken, and will continue to take, measures to minimize any

resulting delay in the rebuild and restart of the WGS to the greatest extent possible, and will seek to minimize any excess emissions from the affected equipment during the restart period. Moreover, to the extent that any delay in performance is ultimately encountered, such delay would not be related to any unanticipated or increased costs or expenses associated with Cabot's performance under the Consent Decree; indeed, Cabot has expended significant additional resources to address this unanticipated development, including with respect to plant personnel resources and the financial implications of an extended shut down period, expedited fabrication of the WGS demister, and the mobilization of outside experts and vendors to the Canal facility during the restart process to ensure that it proceeds as efficiently as possible.

Of course, we will provide additional information as it becomes available, and in the meantime please do not hesitate to contact me at (617) 342-6184 with any questions you may have.

Very truly yours,



Martin O'Neill
Senior Vice President – Safety, Health & Environment

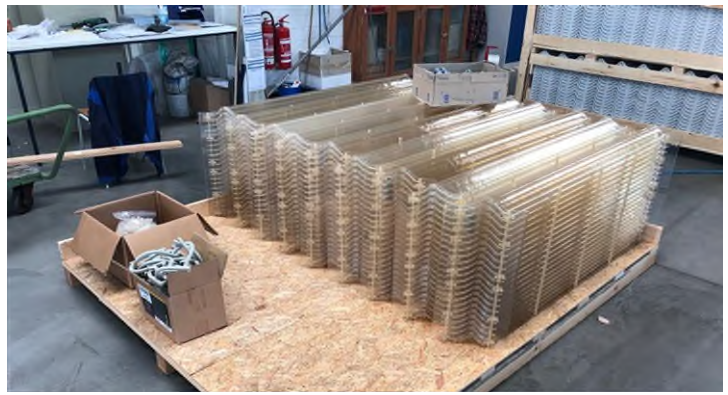
cc: Kellie Ortega, U.S. EPA (Via Electronic Mail)
Jason Dunn, U.S. DOJ (Via Electronic Mail)
Sam Blesi, U.S. DOJ (Via Electronic Mail)
Dwana King, LDEQ (Via Electronic Mail)

ATTACHMENT A

Cabot Canal Plant Demister Failure, July 2021

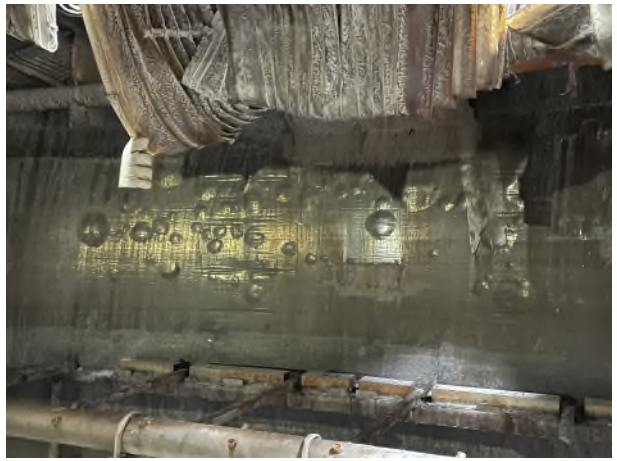
Demister panels in good condition. Looking from bottom past cleaning spray header

New demister sections being shipped from Germany 8/13/21



Demister panels after failure. Fallen and sagging over spray header due to overheating.

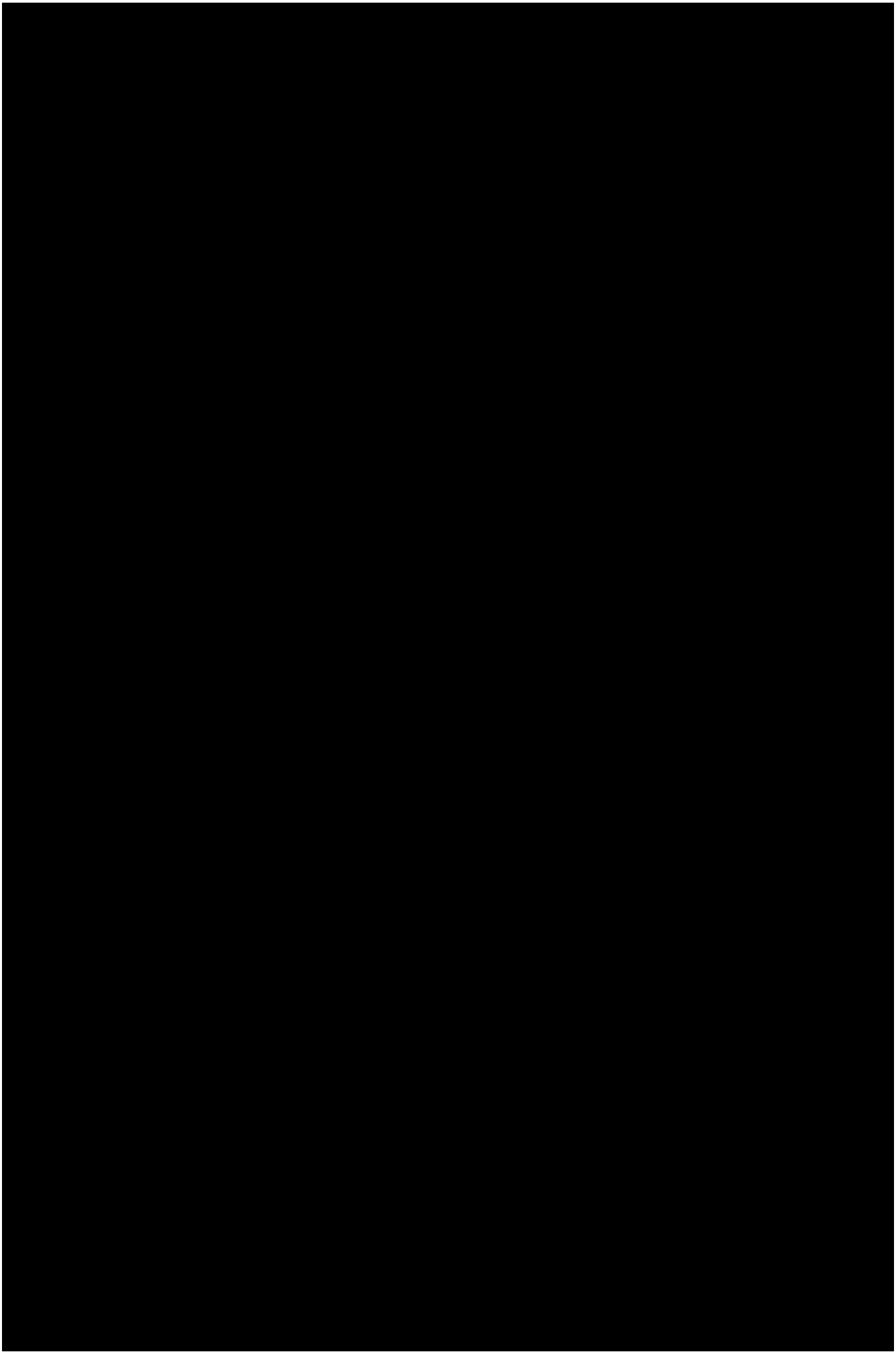
Demister failure. Overheated and drooping over pipes. Blisters on fiber glass vessel

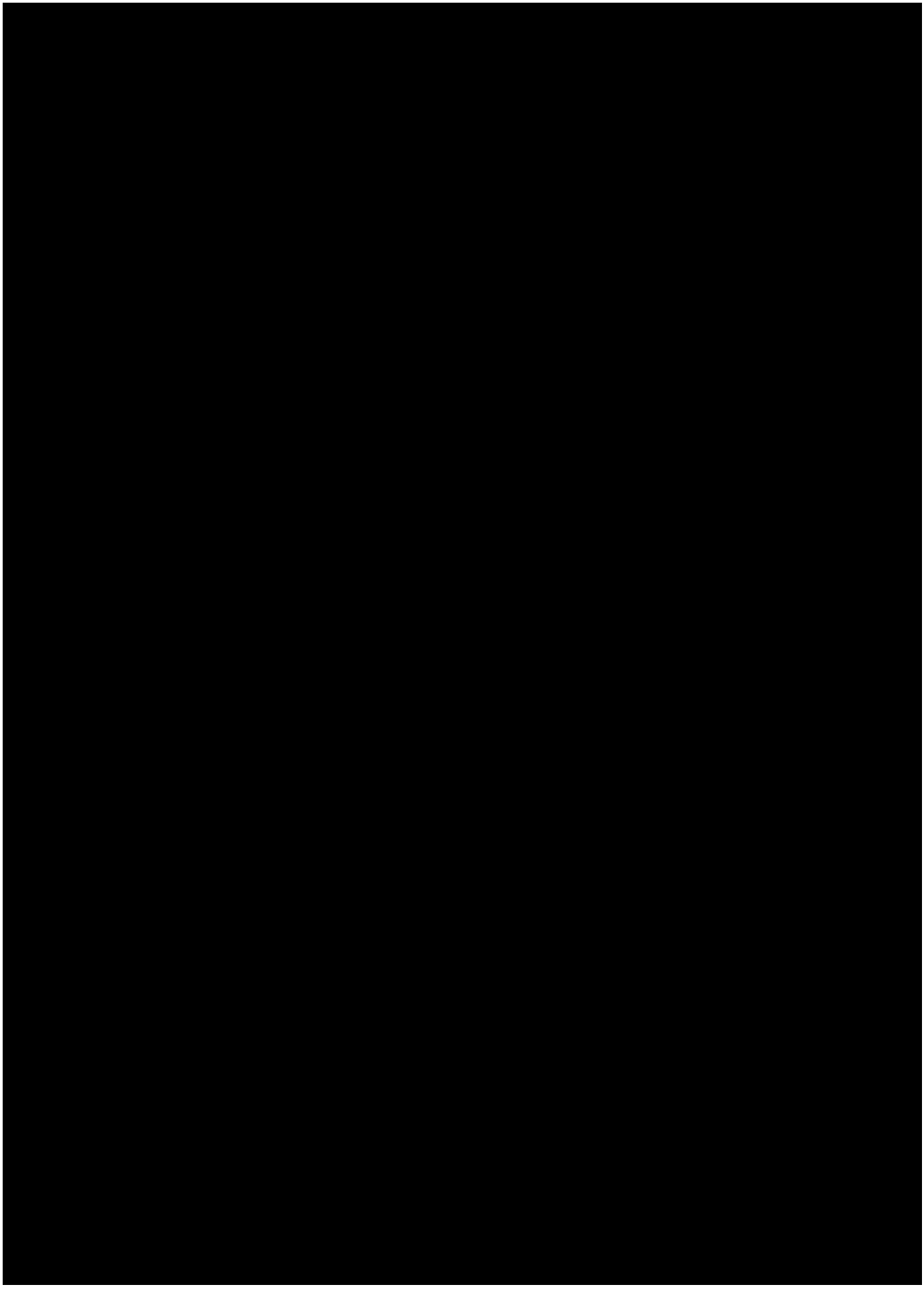


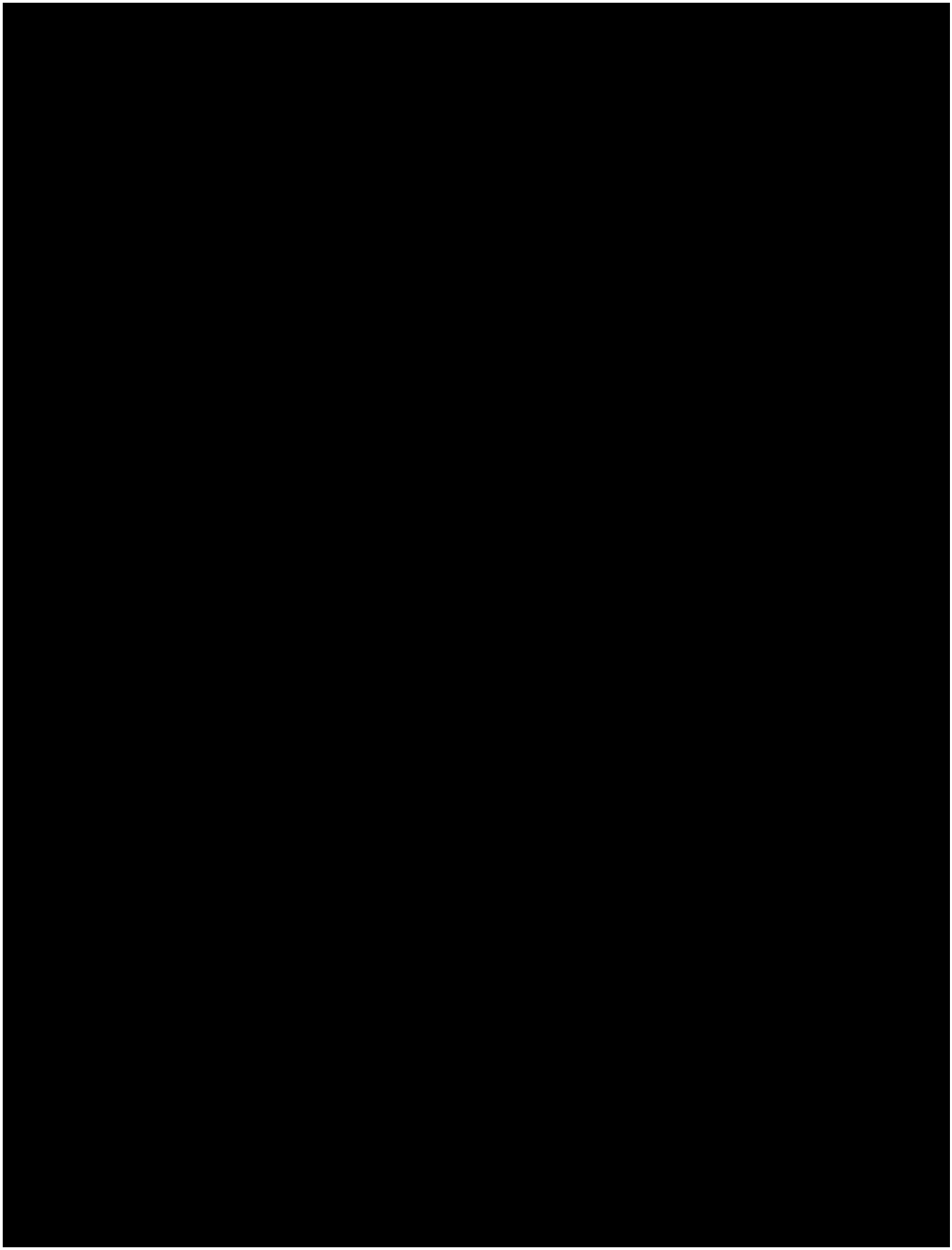
Demister failure of entire panels.

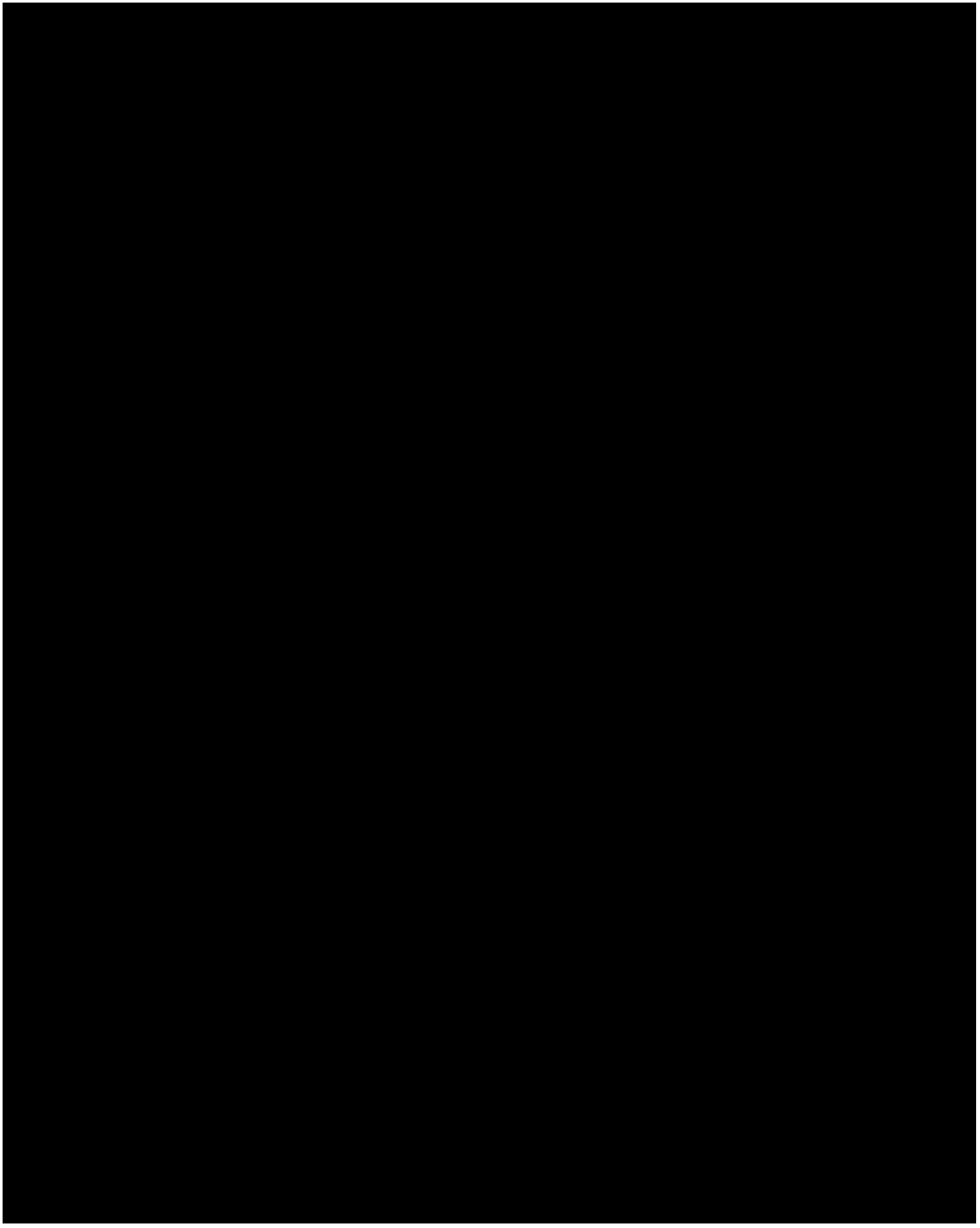
ATTACHMENT B

ATTACHMENT C









ATTACHMENT D